VOLUME 22, PART II.

SUBJECT INDEX.

A

Accelerated.

— Aging Tests on Rubber Goods. W. W. Evans, 548.

— Weathering of Paints on Wood and Metal Surfaces. Harley A. Nelson, 485. Discussion, 499.

Aging Tests.

Accelerated — on Rubber Goods. W. W. Evans, 548.

Alloys.

Physical Properties of Some Copper-Silicon-Aluminum — when Sand Cast. E. H. Dix, Jr., and A. J. Lyon, 250.

Aluminum.

Physical Properties of Some Copper-Silicon — Alloys when Sand Cast. E. H. Dix, Jr., and A. J. Lyon, 250.

B

Bar.

Measurement of the Force of Impact by Means of the Elastic Stretch of a Steel —. H. F. Moore, 124.

Merchant—Iron Made by the Busheled Scrap Process. W. M. Myers, 187. Discussion, 191.

Bibliography.

Resumé of Impact Testing of Materials, with —. H. L. Whittemore, 6.

Brinell.

Some Measurements of the Shape of — Ball Indentation. Fred E. Foss and R. C. Brumfield, 312. Discussion, 335.

Busheled Scrap.

Merchant Bar Iron Made by the — Process. W. M. Myers, 187. Discussion, 191.

C

Cast Iron.

The Physics of — and Its Bearing on All — Products and Specifications for —. William R. Webster, 217.

Castings.

Physical Properties of Some Copper-Silicon-Aluminum Alloys when Sand Cast. E. H. Dix, Jr., and A. J. Lyon, 250.

Tensile Properties of Steel —. Lawford H. Fry, 150. Discussion, 172.

Cement.

Relations Between Voids and Plasticity of — Mortars at Different Relative Water Contents. Frank E. Richart and Edward E. Bauer, 385.

Coal.

A Rational Basis for — Purchase Specifications. E. B. Ricketts, 557. Discussion, 572.

Forms of Specifications for Purchasing —. Hubb Bell, 567. Discussion, 572.

Coating.
A Method for Determing the Spelter — on Iron and Steel Sheets by Measuring the Rise in Temperature of the Acid Employed. D. M. Strickland, 227.
Color Measurement.
An Analysis and Comparison of Systems of —; a Proposed Arrangement for Measured Colors; and Some Notes on Interchangeability in —. H. S. Busby, 504.
Colorimeter.
An Application of the Pfund — to the Determination of Tinting Strength of White Pigments. J. H. Calbeck and C. P. Olander, 515. Discussion, 522.
Concrete.
Fatigue of —. H. F. Clemmer, 408. Discussion, 419.
The Use of Excess Sand and Pit-Run Gravel in — Pavements. R. W. Crum, 375.
Consistency.
Relation of Yield Value and Mobility of Paints to Their So-Called Painting —. J. E. Booge, E. C. Bingham, and H. D. Bruce, 420. Discussion, 460.
Copper.
Physical Properties of Some — Silicon-Aluminum Alloys when Sand Cast. E. H. Dix, Jr., and A. J. Lyon, 250.
Copper-Silicon-Aluminum.
Physical Properties of Some — Alloys when Sand Cast. E. H. Dix, Jr., and A. J. Lyon, 250.
Corrosion.
Preliminary Notes on —. Wilder D. Bancroft, 232. Discussion, 237.

D

Durability Tests.
The Problem of — for Transformer Oils. T. G. Delbridge, 532. Discussion, 538.

E

Electrical Testing.
Electrical and Magnetic Weld Testing as Applied to Butt-Welded Steel Plates. T. Spooner and I. F. Kinnard, 177.

F

Fatigue.
— of Concrete. H. F. Clemmer, 408. Discussion, 419.
— or Progressive Failure of Metals under Repeated Stress. H. F. Moore, J. B. Kommers, and T. M. Jasper, 266. Discussion, 288.

G

Gravel.
An Impact Test for —. F. H. Jackson, 362. Discussion, 368.
The Use of Excess Sand and Pit-Run — in Concrete Pavements. R. W. Crum, 375.

H

Hiding Power.
— of White Pigments. R. L. Hallett, 523. Discussion, 530.

I

Impact Testing.
An Impact Test for Gravel. F. H. Jackson, 362. Discussion, 368.
General Discussion on —, 137.
Impact Tests of Metals. D. J. McAdam, Jr., 37.
Impact Tests of Road Materials. Earl B. Smith, 74.
Impact Tests of Wood. Thomas R. C. Wilson, 55.
Measurement of Pressures Caused by Impact. C. E. Margerum, 104.
Measurement of the Force of Impact by Means of the Elastic Stretch of a Steel Bar. H. F. Moore, 124.
Measuring Forces in Impact. Armin Elmendorf, 117.
Resumé of American Practice in Notched Bar Impact Tests of Metals. C. L. Warwick, 78.
Resumé of — of Materials, with Bibliography. H. L. Whittemore, 6.
Review of the Work on — Done by the British Engineering Standards Association. T. D. Lynch, 100.
Significance of the Impact Test. F. C. Langenberg and N. Richardson, 128.
Inundated Condition.
A Method for Measuring Sands in an —. R. L. Bertin, 404.
Iron.
A Method for Determining the Spelter Coating on — and Steel Sheets by Measuring the Rise in Temperature of the Acid Employed. D. M. Strickland, 227.
Merchant Bar — Made by the Busheled Scrap Process. W. M. Myers, 187. Discussion, 191.
Some Observations on the "Neck-Bend" Test for Wrought —. H. S. Rawdon and Samuel Epstein, 193.
The Physics of Cast — and Its Bearing on All Cast — Products and Specifications for Cast —. William R. Webster, 217.

M

Magnetic Testing.
Electrical and Magnetic Weld Testing as Applied to Butt-Welded Steel Plates, T. Spooner and I. F. Kinnard, 177.
Merchant Bar Iron.
—— Made by the Busheled Scrap Process. W. M. Myers, 187. Discussion, 191.
Metal, Metals.
Accelerated Weathering of Paints on Wood and — Surfaces. Harley A. Nelson, 485. Discussion, 499.
Fatigue or Progressive Failure of — under Repeated Stress. H. F. Moore, J. B. Kommers, and T. M. Jasper, 266. Discussion, 288.
Impact Tests of —. D. J. McAdam, Jr., 37.
Resumé of American Practice in Notched Bar Impact Tests of —. C. L. Warwick, 78.
Mobility.
Relation of Yield Value and — of Paints to Their So-Called Painting Consistency. J. E. Booge, E. C. Bingham, and H. D. Bruce, 420. Discussion, 460.
Mortars.
Relations Between Voids and Plasticity of Cement — at Different Relative Water Contents. Frank E. Richart and Edward E. Bauer, 385.

N

"Nick-Bend" Test.

Some Observations on the — for Wrought Iron. H. S. Rawdon and Samuel Epstein, 193.

O

Oils.

The Problem of Durability Tests for Transformer —. T. G. Delbridge, 532. Discussion, 538.

P

Paints.

Accelerated Weathering of — on Wood and Metal Surfaces. Harley A. Nelson, 485. Discussion, 499.

Relation of Yield Value and Mobility of — to Their So-Called Painting Consistency. J. E. Booge, E. C. Bingham, and H. D. Bruce, 420. Discussion, 460.

Some Physical Properties of —. P. H. Walker and J. G. Thompson, 464. Discussion, 482.

Pavements.

The Use of Excess Sand and Pit-Run Gravel in Concrete —. R. W. Crum, 375.

Pigments.

An Application of the Pfund Colorimeter to the Determination of Tinting Strength of White —. J. H. Calbeck and C. P. Olander, 515. Discussion, 522.

Hiding Power of White —. R. L. Hallett, 523. Discussion, 530.

Pit-Run Gravel.

The Use of Excess Sand and — in Concrete Pavements. R. W. Crum, 375.

Plasticity.

Relations Between Voids and — of Cement Mortars at Different Relative Water Contents. Frank E. Richart and Edward E. Bauer, 385.

Plates.

Electrical and Magnetic Weld Testing as Applied to Butt-Welded Steel —. T. Spooner and I. F. Kinnard, 177.

Pressures.

Measurement of — Caused by Impact. C. E. Margerum, 104.

R

Repeated Stress.

Fatigue or Progressive Failure of Metals under —. H. F. Moore, J. B. Kommers, and T. M. Jasper, 266. Discussion, 288.

Road Materials.

Impact Tests of —. Earl B. Smith, 74.

Rubber.

Accelerated Aging Tests on — Goods. W. W. Evans, 548.

Methods for Conducting Physical Tests on — Products. A. H. Nuckolls, 541.

S

Sand, Sands.

A Method for Measuring — in an Inundated Condition. R. L. Bertin, 404.

The Use of Excess — and Pit-Run Gravel in Concrete Pavements. R. W. Crum, 375.

Sheets.

A Method for Determining the Spelter Coating on Iron and Steel — by Measuring the Rise in Temperature of the Acid Employed. D. M. Strickland, 227.

Silicon.
Physical Properties of Some Copper — Aluminum Alloys when Sand Cast. E. H. Dix, Jr., and A. J. Lyon, 250.
Specifications.
A Rational Basis for Coal Purchase —. E. B. Ricketts, 557. Discussion, 572.
Forms of — for Purchasing Coal. Hubb Bell, 567. Discussion, 572.
Spelter.
A Method for Determining the — Coating on Iron and Steel Sheets by Measuring the Rise in Temperature of the Acid Employed. D. M. Strickland, 227.
Steel.
A Method for Determining the Spelter Coating on Iron and — Sheets by Measuring the Rise in Temperature of the Acid Employed. D. M. Strickland, 227.
Electrical and Magnetic Weld Testing as Applied to Butt-Welded — Plates. T. Spooner and I. F. Kinnard, 177.
Measurement of the Force of Impact by Means of the Elastic Stretch of a — Bar. H. F. Moore, 124.
Tensile Properties of — Castings. Lawford H. Fry, 150. Discussion, 172.
Subgrade Materials.
Physical Properties of —. J. R. Boyd, 337. Discussion, 356.

T

Tensile Properties.
— of Steel Castings. Lawford H. Fry, 150. Discussion, 172.
Tinting Strength.
An Application of the Pfund Colorimeter to the Determination of — of White Pigments. J. H. Calbeck and C. P. Olander, 515. Discussion, 522.
Transformer Oils.
Problem of Durability Tests for —. T. G. Delbridge, 532. Discussion, 538.

V

Voids.
Relations Between — and Plasticity of Cement Mortars at Different Relative Water Contents. Frank E. Richart and Edward E. Bauer, 385.

W

Weathering.
Accelerated — of Paints on Wood and Metal Surfaces. Harley A. Nelson, 485. Discussion, 499.
Weld.
Electrical and Magnetic — Testing as Applied to Butt-Welded Steel Plates. T. Spooner and I. F. Kinnard, 177.
Wood.
Accelerated Weathering of Paints on — and Metal Surfaces. Harley A. Nelson, 485. Discussion, 499.
Impact Tests of —. Thomas R. C. Wilson, 55.
Wrought Iron.
Some Observations on the "Nick-Bend" Test for —. H. S. Rawdon and Samuel Epstein, 193.

Y

Yield Value.
Relation of — and Mobility of Paints to Their So-Called Painting Consistency. J. E. Booge, E. C. Bingham, and H. D. Bruce, 420. Discussion, 460.

AUTHOR INDEX.

A

Abrams, D. A.
Discussion, 356, 370.

Aston, James.
Discussion, 191, 245.

Aupperle, J. A.
Discussion, 244.

B

Bancroft, Wilder D.
Preliminary Notes on Corrosion, 232.

Barrington, W. D.
Discussion, 576, 579.

Bauer, Edward E.
Relations Between Voids and Plasticity of Cement Mortars at Different Relative Water Contents, 385.

Baxter, F. R.
Discussion, 539.

Bell, Hubb.
Forms of Specifications for Purchasing Coal, 467.

Bertin, R. L.
A Method for Measuring Sands in an Inundated Condition, 404.

Bingham, E. C.
Relation of Yield Value and Mobility of Paints to their So-Called Painting Consistency, 420.
Discussion, 460, 461, 463, 503.

Booge, J. E.
Relation of Yield Value and Mobility of Paints to their So-Called Painting Consistency, 420.
Discussion, 461.

Boyd, J. R.
Physical Properties of Subgrade Materials, 337.
Discussion, 356, 357, 358, 359.

Brady, William.
Discussion, 578.

Breyer, F. G.
Discussion, 145, 462, 501.

Bruce, H. D.
Relation of Yield Value and Mobility of Paints to their So-Called Painting Consistency, 420.

Brumfield, R. C.
Some Measurements of the Shape of Brinell Ball Indentation, 312.

Busby, H. S.
An Analysis and Comparison of Systems of Color Measurement; a Proposed Arrangement for Measured Colors; and Some Notes on Interchangeability in Color Measurement, 504.
Discussion, 501, 531.

C

Calbeck, J. H.
An Application of the Pfund Colorimeter to the Determination of Tinting Strength of White Pigments, 515.
Discussion, 522, 530.
Calcott, W. S.
Discussion, 241.
Carson, H. Y.
Discussion, 247.
Chapman, Cloyd M.
Discussion, 483.
Clemmer, H. F.
Fatigue of Concrete, 408.
Comstock, G. F.
Discussion, 172.
Croll, P. R.
Discussion, 482.
Crum, R. W.
The Use of Excess Sand and Pit-Run Gravel in Concrete Pavements, 375.
Discussion, 370.

D

Delbridge, T. G.
The Problem of Durability Tests for Transformer Oils, 532.
Discussion, 539.
Dix, E. H., Jr.
Physical Properties of Some Copper-Silicon-Aluminum Alloys when Sand Cast, 250.
Dudley, P. H.
Discussion, 308.

E

Elliott, G. K.
Discussion, 246, 308.
Elmendorf, Armin.
Symposium on Impact Testing of Materials: Measuring Forces in Impact, 117.
Epstein, Samuel.
Some Observations on the "Nick-Bend" Test for Wrought Iron, 193.
Evans, W. W.
Accelerated Aging Tests on Rubber Goods, 548.

F

Farmer, F. M.
Discussion, 137.
Fippin, E. O.
Discussion, 357, 358, 359, 360.
Force, H. J.
Discussion, 175.
Foss, Fred E.
Some Measurements of the Shape of Brinell Ball Indentation, 312.
Fry, Lawford H.
Tensile Properties of Steel Castings, 150.
Discussion, 139, 173, 175.

G

Gillett, H. W.
Discussion, 298.
Goldbeck, A. T.
Discussion, 140, 360.
Green, Henry.
Discussion, 460.

H

Hall, C. H.
Discussion, 500.
Hall, J. H.
Discussion, 309.
Hallett, R. L.
Hiding Power of White Pigments, 523.
Discussion, 499, 531.
Hanson, C. F.
Discussion, 539.
Hatt, W. K.
Discussion, 137, 419.
Herschel, W. H.
Discussion, 463, 538.
Holton, E. C.
Discussion, 499, 502.
Holz, Herman A.
Discussion, 145, 335.
Hood, O. P.
Discussion, 572, 578.

J

Jackson, F. H.
An Impact Test for Gravel, 362.
Jasper, T. M.
Fatigue or Progressive Failure of Metals Under Repeated Stress, 266.
Discussion, 309.
Job, Robert.
Discussion, 576, 578, 579.

K

Kimball, A. L.
Discussion, 301.
Kinnard, I. F.
Electrical and Magnetic Weld Testing as Applied to Butt-Welded Steel Plates, 177.
Kommers, J. B.
Fatigue or Progressive Failure of Metals Under Repeated Stress, 266.

L

Langenberg, F. C.
Symposium on Impact Testing of Materials: Significance of the Impact Test, 128.
Lessells, J. M.
Discussion, 306.

Lynch, T. D.
Symposium on Impact Testing of Materials: Review of the Work on Impact Testing Done by the British Engineering Standards Association, 100.
Discussion, 174.
Lyon, A. J.
Physical Properties of Some Copper-Silicon-Aluminum Alloys when Sand Cast, 250.

M

Margerum, C. E.
Symposium on Impact Testing of Materials: Measurement of Pressures Caused by Impact, 104.
Marston, Anson.
Discussion, 304, 359.
McAdam, D. J., Jr.
Symposium on Impact Testing of Materials: Impact Tests of Metals, 37.
Discussion, 140, 288.
Moldenke, Richard.
Note on a Scheme for the Study of the Physics of Cast Iron. Appendix to Paper by William R. Webster on The Physics of Cast Iron and Its Bearing on All Cast Iron Products and Specifications for Cast Iron, 224.
Moore, H. F.
Symposium on Impact Testing of Materials: Measurement of the Force of Impact by Means of the Elastic Stretch of a Steel Bar, 124.
Fatigue or Progressive Failure of Metals Under Repeated Stress, 266.
Discussion, 173.
Muckenfuss, A. M.
Discussion, 500.
Myers, W. M.
Merchant Bar Iron Made by the Busheled Scrap Process, 187.

N

Nelson, Harley A.
Accelerated Weathering of Paints on Wood and Metal Surfaces, 485.
Discussion, 484, 501, 502.
Nuckolls, A. H.
Methods for Conducting Physical Tests on Rubber Products, 541.

O

Olander, C. P.
An Application of the Pfund Colorimeter to the Determination of Tinting Strength of White Pigments, 515.

P

Pearson, J. C.
Discussion, 357.
Purrington, W. F.
Discussion, 368.

R

Rather, J. B.
Discussion, 539.
Rawdon, H. S.
Some Observations on the "Nick-Bend" Test for Wrought Iron, 193.
Discussion, 238.
Richardson, N.
Symposium on Impact Testing of Materials: Significance of the Impact Test, 128.
Richart, Frank E.
Relations Between Voids and Plasticity of Cement Mortars at Different Relative Water Contents, 385.
Ricketts, E. B.
A Rational Basis for Coal Purchase Specifications, 557.
Discussion, 579.
Rogers, J. I.
Discussion, 172.

S

Schwartz, H. A.
Discussion, 300.
Smith, Earl B.
Symposium on Impact Testing of Materials: Impact Tests of Road Materials, 74.
Discussion, 141.
Smith, H. E.
Discussion, 499.
Speller, F. N.
Discussion, 237.
Spooner, T.
Electrical and Magnetic Weld Testing as Applied to Butt-Welded Steel Plates, 177.
Strickland, D. M.
A Method for Determining the Spelter Coating on Iron and Steel Sheets by Measuring the Rise in Temperature of the Acid Employed, 227.
Styri, Haakon.
Discussion, 309.

T

Templin, R. L.
Discussion, 305.
Thompson, G. W.
Discussion, 460, 461, 482, 522.
Thompson, J. G.
Some Physical Properties of Paints, 464.
Discussion, 484.
Thum, E. E.
Discussion, 248.
Tuckerman, L. B.
Discussion, 293.

W

Walker, P. H.
Some Physical Properties of Paints, 464.
Discussion, 460, 462, 499.
Walker, W. H.
Discussion, 242.
Warwick, C. L.
Symposium on Impact Testing of Materials: Resumé of American Practice in Notched Bar Impact Tests of Metals, 78.
Webster, William R.
The Physics of Cast Iron and Its Bearing on All Cast-Iron Products and Specifications for Cast Iron, 217.
Whittemore, H. L.
Symposium on Impact Testing Materials: Résumé of Impact Testing of Materials with Bibliography, 6.
Wilson, Thomas R. C.
Symposium on Impact Testing of Materials: Impact Tests of Woods, 55.
Discussion, 140.

Y

Young, C. D.
Discussion, 144.